The Role of Carbon Reductions and Removals on the Road to 2040: Perspectives from the Chemical Industry

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Climate Change and Energy28 November 2024, University of Potsdam (online)

The chemical industry: a pillar of the European economy

The chemical industry is the 4th largest producer in EU manufacturing
Europe is the 2nd largest chemical producer in the world
15% of world's chemical production stems from Europe
1.2 million jobs
Our essential materials are contained in 95% of all manufactured goods
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EUROPE

COSMETICS CONSTRUCTION ELECTRONICS HEALTH PAINTS & COATINGS HOUSEHOLD PACKAGING NEW APPLICATIONS

(link)



















Carbon Removals Certification Framework: a first step to recognise removals

• Text available

- Four activity categories:
 - permanent carbon removal (DACCS and BECCS) includes permanent CCU
 - temporary carbon storage in long-lasting products requires 35y storage
 - temporary carbon storage from carbon farming (agriculture, peatland, forestry)
 - soil emission reduction
- Certification criteria will include quantification, additionality, long-term storage, and sustainability. Expert Group to assist on methodologies.
- Certificates can be used for the EU's climate objectives and NDCs. They cannot be sold to third countries for their NDC compliance.
- Commission to set up carbon removal registry within 4 years.



Permanent carbon removal Permanent carbon removal refers to human activities removing CO₂ from the atmosphere and storing it securely and durably for several centuries. Some examples include: Solid carbon accounting - Direct air carbon capture with storage (DACCS); Easy to integrate in ETS - Bioenergy with carbon capture and storage (BECCS) and other biomass-based methods (BioCCS); Chemically binding CO₂ permanently into products; Very expensive - Other technological solutions that lead to permanent storage. Resources needed (biomass, electricity) This Photo by Unknown Author is licensed under CC B)









Last word on carbon removals and residual industrial emissions

- Carbon removals are meant to compensate for residual emissions
- The problem is to define what "residual emissions" actually means
- It's a combination of objective and subjective factors. Few examples:
 - Unavoidable emissions due to industrial processes or feedstock used (e.g. cement, petrochemicals)
 - Emissions release in the atmosphere due to safety (e.g. flaring) or accidents (e.g. damage to CO₂ pipelines)
 - Lack of infrastructures to implement technically feasible solutions (e.g. congested electricity grids)
 - Lack of business case to invest in low-carbon solutions (economically unfeasible)
- The challenge for the future is to find an equilibrium between the signal to invest in emission reduction with accessing carbon removals to allow for the continuation of industrial activities in Europe.



Conclusions

- Carbon removals are an integral part of a climate neutrality framework.
- It would make sense for all sectors of the economy, including sectors under the ETS, to have access to credits from carbon removals on their path to climate neutrality.
- Domestic carbon removals might not suffice to compensate for residual emissions.
- Carbon removals are not the panacea to all challenges Europe faces to reach climate neutrality.
- The future of industry in Europe will have an impact on the demand for carbon removals:
 - Speed and magnitude of investments in industrial decarbonisation?
 - Or Decarbonisation via Deindustrialisation?

Thank you.



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About Cefic Cefic, the European Chemical Industry Council, founded in 1972, is the voice of large, medium and small chemical companies across Europe, which provide 1.1 million jobs and account for 15% of world chemicals production. Cefic members form one of the most active networks of the business community, complemented by partnerships with industry associations representing various sectors in the value chain. A full list of our members is available on the Cefic website. Cefic is an active member of the International Council of Chemical Associations (ICCA), which represents chemical manufactures and producers all over the world and seeks to strengthen existing cooperation with global organisations such as UNEP and the OECD to improve chemicals management worldwide

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